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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/349,346 | 07/07/1999 | DAVID JOHN STACEY | | 6530 |

7590

04/07/2004

WILLIAM M. LEE JR.
LEE, MANN, SMITH, MCWILLIAMS,
SWEENEY & OHLSON
POST OFFICE BOX 2786
CHICAGO, IL 606902786

EXAMINER

ABELSON, RONALD B

| ART UNIT | PAPER NUMBER |
|----------|--------------|
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2666

DATE MAILED: 04/07/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/349,346

Applicant(s)

STACEY ET AL.

Examiner

Ronald Abelson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-8 and 10-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2,3,10,11 and 17 is/are rejected.
- 7) ☒ Claim(s) 4-8 and 12-16 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 July 1999 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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Allowable Subject Matter

1. The indicated allowability of claims 2, 3, 10, 11, and 17 is withdrawn in view of the newly discovered reference(s) to Saito and Peres. Rejections based on the newly cited reference(s) follow.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 2, 3, 10, 11, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Saito (US 5,541,926) in view of Peres (US 5,999,533).

Regarding claims 2, 10, and 17, Saito teaches a method and apparatus for interfacing frame based TDM telecommunications traffic (fig. 3, telephones, TVs, col. 6 lines 50-53) in which each TDM frame supports a plurality of data structures each comprising one or more channels from a frame-based TDM network

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(telephones, TVs, col. 6 lines 50-53) to an asynchronous network in which traffic is transported in cells or packets (fig. 3 element 815).

Peres teaches the concept issuing credits at a substantially constant rate (accumulate at the average cell transmission rate, col. 1 lines 38-40), assigning the credits to each data structure according the size of that data structure (accumulate at the average cell transmission rate, col. 1 lines 38-40), determining for each data structure a threshold number of assigned credits (credits exist, col. 1 lines 42-43), and when the threshold value is reached, assembling that data structure into cells or packets for dispatch into the asynchronous network (transmitted, col. 1 lines 42-43).

Regarding claim 17, in addition to the limitations previously mentioned, Peres teaches dispatching cells into the ATM network at a substantially constant rate (transmitted at the peak rate, col. 1 lines 42-43).

Therefore it would have been obvious to one of ordinary skill in the art, having both Saito and Peres before him/her and with the teachings [a] as shown by Saito, a method and apparatus for interfacing frame based TDM telecommunications traffic in which each TDM frame supports a plurality of data structures each comprising one or more channels from a frame-based TDM

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network to an asynchronous network in which traffic is transported in cells or packets, and [b] as shown by Peres, flow control of variable rate data, to be motivated to modify the system of Saito by implementing a credit based flow control algorithm in the buffer controller (fig. 3 box 807). The algorithm would increment a separate counter corresponding to each data structure input (fig. 3 elements 812-814) with a credit at a rate corresponding to the average time required for the source to transmit data corresponding to a complete ATM frame. Transmission to the ATM Cell Processing Unit (fig. 3 box 808) would be allowed when both data to form a complete ATM has been received at the location (fig. 3 box 801-803) and the counter corresponding to the location has a credit balance greater than zero. When transmission occurs, the corresponding counter would be decremented. This would improve the system since credit based flow control has been shown to be effective in ATM networks processing variable rate input data (Peres: col. 1 lines 37-43).

Regarding claims 3 and 11, credits are assigned via a connection control (Saito: fig. 3 box 807).

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Allowable Subject Matter

4. Claims 4-8 and 12-16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claims 4 and 12, nothing in the prior art of the record teaches or fairly suggests the connection control assigns credits to a data structure by writing the identity of that data structure into free locations in a reverse channel map, in combination with all the other limitations listed in the claim.


Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ronald Abelson whose telephone number is (703) 306-5622. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on (703) 308-5463. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Ronald Abelson
Examiner
Art Unit 2666

3/26/04


DARGTON
PRIMARY EXAMINER